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THE ZOOLOGIST:

A

POPULAR MONTHLY MAGAZINE

OF

NATURAL HISTORY

AND

JOURNAL FOR RECORDING FACTS & ANECDOTES

RELATING TO

QUADRUPEDS, BIRDS, REPTILES, FISHES, ANNELIDES,
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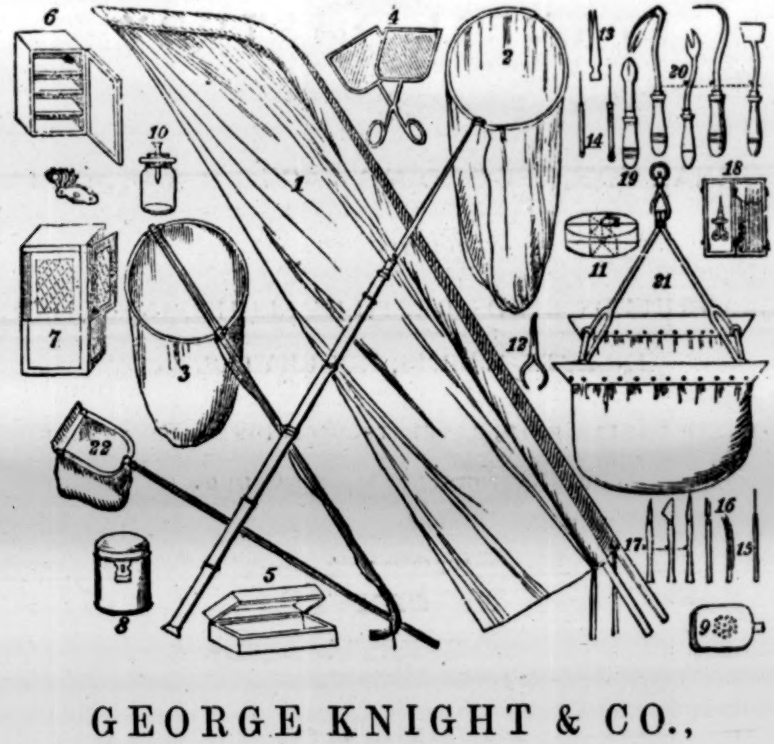

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When left dirty or hungry, it would scream violently till attended to, varied by a kind of pumping noise very similar to that which is made by the adult animal. If its cries were taken no notice of, or no one was in the house, it would lie quiet, but as soon as it heard a footstep near it would recommence with great violence. In five weeks it cut its two upper front teeth, but all this time it had not grown in the least, remaining, both in dimensions and weight, the same as when I first procured it. This was no doubt owing to want of milk or other equally nourishing food. Rice water was a miserable substitute, and cocoa-nut milk, which I sometimes gave it, did not quite agree with its stomach. To this I imputed an attack of diarrhœa which the poor little animal suffered, for which I gave it a small dose of castor-oil, which operated very well, and it afterwards soon became better. It was however again taken ill, and this time more seriously. The symptoms were all those of intermittent fever accompanied with watery swellings of the feet and head. It lost all appetite for its food, and after lingering for a week, a most pitiable object, died, after being in my possession nearly three months."—P. 386.

Mr. Wallace arrives at the following conclusions respecting the orangs of Borneo:—

"1. That two species of orang have been ascertained to exist in Borneo.

"2. The difference between them are well marked in the males, but much less distinct in the females.

"3. That all the females are characterized by the small-sized skull without prominent ridges and by their subtruncated dilated canine teeth.

"4. The males of both species possess large conical canines.

"5. That the form, size and proportions of the crania, and the size and position of the teeth, vary in each individual to such an extent, that these variations alone cannot be taken to mark distinct species.

"Most of these conclusions are fully supported by Prof. Temminck, from an examination of the very extensive series of specimens in the Leyden Museum, though, from not possessing specimens of the smaller male, he was unable to detect any specific difference in the females."—P. 475.

BRITISH MUSEUM

'*On the Variation of Species, with especial reference to the Insecta; followed by an Inquiry into the Nature of Genera.*' By T. VERNON WOLLASTON, M.A., F.L.S. 206 pp., 12mo, price 5*s*. London: Van Voorst. 1856.

Mr. Vernon Wollaston is one of that very limited number of entomologists who have ventured to look for something in Entomology beyond the knowledge of differences. No one has studied differences more thoroughly; but the mass appear to regard differences as the end; whereas Mr. Wollaston masters them as the means to some other end,—as the letters by which he is eventually to acquire a more perfect knowledge of the language of Nature. He is not even himself yet master of his great requirings: he states a main object as the desire to induce British entomologists to enlist themselves in the cause of insect geography; whereas he exhibits in every page an unsatisfied yearning after a more intimate acquaintance with all Nature's laws, the distribution of forms being but a branch of the almost boundless study. Rare, indeed, is the union of the talents which Mr. Wollaston has displayed in his entomological career. How many are there who emulate his zeal in acquiring the knowledge of difference, without any idea of making that knowledge subserve an ulterior object! How many lay down laws for Nature with a brilliancy of imagination that dazzles all beholders, but stay not to acquire that rudimentary knowledge of facts by which alone their speculations can possibly be tested!

The present work, as shown by the title, treats of two very different subjects, the "Variation of Species" and the "Nature of Genera." The one has insensibly led the author to the other. In the first Mr. Wollaston is "at home," in the second he is "at sea;" and yet such is the propensity in man to take *omne ignotum pro magnifico* that the second will be admired far more than the first; and the admirers will charge on the non-admirers that very incapability which induces their own admiration. To the man who believes in the hereditary transmission of form, there is a definite idea of species unknown to him who believes his great-great-great-grandfather may have been a plesiosaur or a pterodactyle; but there is no such definite idea connected with the word genus. It is curious to observe that every advocate of what might be called the naturalness of genera has a view of his own as to what a genus is; thus, place on a board a number of scarabæoid, staphylinoid or cerambycoid beetles, and no two coleopterists shall make the slightest approximation to each other as to what number of species or what type of form shall constitute the genera Scarabæus, Staphylinus or Cerambyx. I would challenge such men as Waterhouse, Power or Wollaston to the task; and the result would show that the terms, and the associations implied by the terms, found a different solution in the mind of each. How, then, can the mass of students, who look up to these stars of the first magnitude for illumination,—how, I say, can they be expected to possess precise and definite ideas on this difficult subject?

Mr. Wollaston's views on the variation and the effects of isolation on species have been previously published in his magnificent work on the insects of Madeira. In the present volume they are repeated, expanded and confirmed. Their discussion occupies 156 pages; then follows the "Generic Theory," occupying 23 pages; and, lastly, a chapter without a title, unless its motto can be regarded as one,

> "Depositâ sarcinâ, levior volabo ad cœlum."

This chapter certainly is very beautiful, and very forcibly brings to mind the glorious hymn with which Thompson concludes his 'Seasons.' It is a "Jamque opus exegi" without its conceit, and proves that Entomology, in the instance of Mr. Wollaston, has had no tendency to contract the power or cramp the energies of a truly noble intellect.

Now let us revert to the "Generic Theory." If the reader take seven pieces of money, of similar size but of different die and metal, and place them on the table before him, one in the centre and six around it, all touching the central coin, he will have some idea of the mode in which a small group of species are naturally associated. If we call the central coin A, B and C shall agree with it in being gold coins; therefore those three must approximate. D and E shall be silver, but agree with A in being coins of Victoria; therefore those three must approximate. F and G shall be copper, but A, F and G shall agree in bearing the same date; those three must approximate. Then there should be a reason for placing C and D and A together, such, for instance, as their bearing George and the Dragon on the obverse. E and F and A agree in some one character, as, for instance, the legend; and G and B and A in another character, as having the margin perfectly smooth. Now, every insect has distinctive characters stamped on it and on its descendants, far more permanent than those on coins; and, unless we accommodate and harmonise all of them, we can form no idea of Nature's system. This principle of a plurality of affinities, of the radiation, so to speak, of affinities, must be the ground-work for the association of all groups higher than species; and this Mr. Wollaston seems entirely to ignore. Let him speak for himself.

"There can be no doubt that amongst a large class of ordinary observers a clear perception of the generic system in an abstract sense does not by any means prevail. What the nature of a genus really is, would appear to have been very commonly overlooked, or perhaps misunderstood by people of this stamp: and the consequence has been that the wildest notions have frequently arisen, even from men of sound *specific* attainments, as to the claims (for annihilation or retention as 'genera') of certain subsidiary zoological assemblages. The terms 'genus' and 'species' have been conjointly so long associated in our minds with the self-same things (whatsoever they may be), that they have become almost part and parcel of the objects themselves); so that the student who does not sufficiently reflect on their true signification is apt to regard them as of equal importance,—or, rather, more often perhaps than otherwise, to make the latter subservient (or inferior) to the former! This however is, in reality, the very reverse of what should be the case, as a moment's consideration will indeed at once convince us: for what are genera, after all, but dilatations (as it were) along a chain *which is itself composed of separate,* though differently shaped *links?* The links (or the actual, independent bodies which constitute the chain) are the species; but the knobs, or swellings, which their several forms may tend, by degrees, to establish along its course (through the slightest disparity which each of them presents from that which is next in succession to it; and therefore through the gradual manner in which the bulbs or nodules may be said on the whole to be produced), are the groups into which those species naturally fall. It matters not a straw whether these assemblages be primary, secondary, tertiary, &c.,—in other words, whether they be departments, families, or genera, as usually understood,—the *principle* is in every instance the same; the difference being merely relative and not absolute.

"Or, if we choose to vary the simile, we may compare the whole system to a cord, upon which beads, of innumerable sizes, patterns, and colours, have been densely strung. Now, if there were no such things as natural divisions in the organic world, these beads (which represent the separate species) might have been disposed of anyhow,—their positions with respect to each other would under those circumstances have been of no importance. But such is not the case: there is an order and method throughout Nature, which shows that every individual portion of it has been adjusted by the Master's hand, and that nothing has been left to chance. Those beads (to follow up the metaphor), of countless magnitudes and hues, have had their proper places allotted to them,—and moreover with such care and regularity, that a complete plan or scheme of distribution is at once conspicuous. Although there are not even two amongst that enormous multitude which are *precisely* alike (for every species, however it may resemble its next ally, has *some* distinctive feature of its own), we immediately perceive that those beads which have most in common are, as it were, attracted to each other,—so as, by their close approximation, or contact, to create excrescences and stripes, of divers kinds, along the entire length of the cord. If we assume now that the red beads have been collected together to the length (for instance) of a yard, and that within that space a dozen protuberances, of discordant aspects and dimensions, have (by the union of those beads which more nearly simulate each other) been brought about, we shall have a very fair idea of the ordinary grouping of the animate tribes. The red beads, taken in the mass, may be liked to a perfect 'family;' the different gibbosities to twelve well-marked 'genera,' which that family includes; whilst the 'species' (the real *dramatis personæ,* of independent existence, which are nevertheless compelled to occupy the situations we have described,—thus *causing* the divisions to be mapped out) are here typified, as everywhere, by the several beads themselves."—P. 160.

From this quotation it is quite clear that, whatever may be Mr. Wollaston's avowed opinion on the naturalness of a linear series, all his thoughts tend to an acknowledgment of the existence of such a series; and, therefore, that, if the theory of a plurality of affinities be true, then all definitions having reference to a line or string of beads must be fallacious.

Notwithstanding this antagonistic view of the theory of genera between Mr. Wollaston and myself, I cannot close the book without saying that I found it deeply instructive; nor can I refrain from heartily recommending it to the readers of the 'Zoologist,' as one abounding in truthful observation, and well deserving a most studious perusal.

There is a peculiarity in Mr. Wollaston's style that might easily be amended: the too-frequent use of parentheses, not only as exhibited by printer's signs, but in the context, which every now and then halts through this peculiarity. This, it may be said, is hyper-criticism; but, gentle reader, fear not for thyself, if an entomological scribe: it may be quite excusable in thee.

'*The Natural History of Ireland.*' In Four Volumes. Vol. IV. Mammalia, Reptiles and Fishes; also Invertebrata. By the late WM. THOMPSON, Esq. London: Henry G. Bohn, York Street. 1856.

The early death of William Thompson was an event sincerely deplored by every naturalist in the United Kingdom. He was taken from us in the very prime of life, and in the very zenith of his useful career. He seems to have had a constant presentiment of the sudden termination of his labours,—to have been fully aware that his life would not be prolonged until the completion of his fondly cherished object, the publication of a complete Natural History of Ireland. In this spirit his will provides that "in the event of his decease before the publication of his work on the Natural History of Ireland shall have been completed, it is his wish that the whole of his manuscript relating thereto shall be handed over to Mr. Robert Patterson and Mr. James Garrett, both of Belfast, with a request that they would undertake the duties of superintending editors of the same, in order that the whole be carefully published;" and, again, the will goes on to say, "Should I die before these volumes are prepared for the press, it is my express desire that none of my notes be printed without having undergone *rigid correction*," adding, "I have always written so hastily and carelessly." These gentlemen undertook the task of editing poor Thompson's MSS.; but one of them, Mr. Garrett, died considerably before its completion. The survivor, however, subsequently enjoyed the co-operation of Dr. Dickie and Dr. Ball.

The circumstances here detailed,—the presentiment of death and its sad fulfilment; the literary bequest to his friends; the "express desire for rigid correction;" the acknowledgment of "haste and carelessness,"—are highly important elements in the publication; and we think that they disarm the critic, as far as Mr. Thompson's own labours are concerned; but we think, also, that the editors would have shown far more regard to the testator's fame had they complied literally with his request, and submitted the whole of the MSS. to a much more rigid and laborious correction than it appears to have received. In fact, we do not hesitate to say that the work appears deteriorated and confused in its passage through their hands. Thus, the Mammalia are divided into sections and orders, all of them numbered and named; but the deer are placed under Glires, an order which, thus augmented, is made to intervene between the Canidæ and the Phocidæ. Again, the class Reptilia begins with a heading in capitals, TESTUDINATA; the first species noticed being the logger-head turtle, the second the common lizard; and this is followed by a heading, TURTLE; and a species is noticed, supposed to be the snapping turtle. Then follows a heading, Ophidia; and under this range the blind worm, the ringed snake, the common viper, the common frog, the common toad, the natterjack, the warty newt, the smooth newt, and the palmated smooth newt. Such is the commencement of the volume; and the same want of care pervades the whole. Some light may be thrown on this jumble by a reference to Mr. Patterson's Preface. He says:—"On examining the mass of papers placed in our hands, we found those relating to the principal divisions of the animal kingdom carefully separated from each other, and the materials for each of the minor groups in separate covers. Within these, smaller envelopes were placed, each appropriated to one species. So far nothing could be more methodical or more complete—the families, genera and species were arranged in regular sequence, and, of course, any particular one could immediately be found." We may easily suppose that a note on the red deer got accidentally slipped into the same envelope as one on the dormouse; that a note on the lizard got between two on turtles; that one on the frog was accidentally placed in an envelope marked Ophidia. But such malpositions must have been the result of the merest accident, and cannot be regarded as exhibiting any intention on the part of the writer. It was the obvious duty of the editors to amend such errors. Were they not appointed for this very purpose?

Having made this preliminary observation, applicable only to the mode in which the volume is got out, and not at all to its intrinsic value, it becomes necessary to state that the work abounds in useful material for the compilation, at some future day, of a Natural History of Ireland. The account of each species appears quite as a detached paper, and has little or no reference to the context preceding or following. Many of these detached papers, perhaps I might say all of those which are carefully worked up, have appeared, from time to time, in the pages of periodicals. Thus, the paper on the Irish rat (*Mus hibernicus*) appeared in the 'Zoological Journal' for 1837, at which date Mr. Thompson wrote of it as a species; in 1850 it is mentioned as "Mus Rattus?" in 1851 as "black rat with white spot on the breast." This little summary shows the readiness with which Mr. Thompson altered or amended his views, when he saw reason for doing so. The paper on the Irish hare was published in the 'Transactions of the Royal Irish Academy' for 1838; that on Echiodon Drummondii in the 'Proceedings of the Zoological Society' for 1837; and a great number of others in the 'Annals and Magazine of Natural History.'

Mr. Thompson left nothing relating to insects, except a statement of numbers, communicated to him by Mr. Haliday. This having been prepared so long since as 1843, the editor of this volume has done well in applying to Mr. Haliday for a more recent census; and that eminent entomologist has furnished a digested table of the number of known species brought up to the present day. This is peculiarly valuable, both as furnishing an approximation to the real extent of the Insect Fauna of Ireland, and also as exhibiting Mr. Haliday's matured and most recent views on the subject of classification. We have no hesitation in extracting it entire.

"COLEOPTERA, 929 species, as under.

"Stylopidæ 2, Mordellidæ 4, Cantharidæ 2, Anthicidæ 1, Salpingidæ 3, Œdemeridæ 3, Lagridæ 1, Pyrochroidæ 1, Melandryidæ 3, Tenebrionidæ 10, Chrysomelidæ 81, Donacidæ 10, Cerambycidæ 13, Curculionidæ 149, Hylesinidæ 6, Bostrichidæ 1, Cetonidæ 1, Rutelidæ 1, Melolonthidæ 4, Geotrupidæ 5, Copridæ 2, Aphodidæ 22, Trogidæ 1, Lucanidæ 1, Ptinidæ 10, Cleridæ 3, Melyridæ 3, Lampyridæ 19, Cyphonidæ 7, Dascillidæ 1, Elateridæ 17, Buprestidæ 1, Heteroceridæ 3, Byrrhidæ 3, Dermestidæ 4, Trixagidæ 1, Mycetophagidæ 1, Cryptophagidæ 23, Colydidæ 1, Cucujidæ 1, Nitidulidæ 26, Phalacridæ 2, Engidæ 2, Lathrididæ 13, Endomychidæ 2, Coccinellidæ 15, Corylophidæ 4, Clambidæ 3, Anisotomidæ 8, Silphidæ 23, Scydmænidæ 5, Pselaphidæ 9, Staphylinidæ 91, Histridæ 10, Hydrophilidæ 45, Elmidæ 5, Gyrinidæ 6, Dytiscidæ 65, Carabidæ 153, Cicindelidæ 1, Trichopterygidæ 16.

"NEUROPTERA, 243 species, as under.

"Forficulidæ 2, Locustidæ 8, Gryllidæ 1, Achetidæ 1, Blattidæ 1, Lepismidæ 4, Poduridæ 22, Liotheidæ 9, Philopteridæ 47, Psocidæ 10, Perlidæ 10, Ephemeridæ 7, Libellulidæ 7, Æschnidæ 3, Agrionidæ

15, Phlæothripidæ 6, Thripidæ 34, Semblidæ 1, Hemerobidæ 18, Coniopterygidæ 2, Phryganidæ 35.

"LEPIDOPTERA, 645 species, as under.

"Pterophoridæ 7, Crambidæ 13, Tineidæ 116, Tortricidæ 86, Noctuidæ 142, Pyralidæ 26, Phalænidæ 139, Bombycidæ 51, Hepialidæ 6, Sphingidæ 21, Hesperidæ 2, Papilionidæ 36.

"HYMENOPTERA, 1247 species, as under.

"Tenthredinidæ 111, Siricidæ 1, Ichneumonidæ 223, Braconidæ 325, Fœnidæ 1, Proctotrupidæ 43, Scelionidæ 81, Ceraphronidæ 17, Cyniphidæ 39, Chalcidæ 263, Mymaridæ 35, Chrysidæ 1, Dryinidæ 17, Bethyllidæ 1, Pompilidæ 8, Sphegidæ 1, Crabronidæ 18, Eumenidæ 2, Vespidæ 3, Apidæ 45, Tormicidæ 12.

"DIPTERA, 1130 species, as under.

"Hippoboscidæ 4, Phoridæ 17, Œstridæ 3, Muscidæ 494, Conopidæ 3, Syrphidæ 80, Pipunculidæ 8, Platypezidæ 7, Lonchopteridæ 4, Dolichopidæ 105, Empidæ 80, Scenopinidæ 2, Bombylidæ 7, Asilidæ 3, Leptidæ 7, Tabanidæ 4, Stratiomidæ 22, Rhyphidæ 3, Heteroclitæ 6, Tipulidæ 73, Phlibotomidæ 16, Culicidæ 11, Chironomidæ 60, Simulidæ 4, Bibionidæ 25, Cecidomyzidæ 15, Mycetophilidæ 52, Pulicidæ 5.

"HEMIPTERA, 246 species, as under.

"Coccidæ 10, Aphidæ 53, Psyllidæ 30, Fulgoridæ 6, Cercopidæ 41, Notonectidæ 10, Nepidæ 1, Gerridæ 8, Hebridæ 1, Cicericidæ 9, Tingidæ 7, Redervidæ 3, Capsidæ 34, Coreidæ 4, Anisoscelidæ 3, Lygeidæ 10, Penlatomidæ 9, Sculelleridæ 1, Pediculidæ 6.

"Making a total of 4440 species named in our collections, but subject no doubt to much correction as to names. * * * The families are not in very good order, and many are kept which would be better sunk in neighbouring families; but the enumeration helps to show the local distribution of groups the better.—A. H. H."—P. 365.

'*The Natural History Review.*' No. XI., dated July, 1856. *Price* 2*s*. 6*d*. London, Williams & Norgate; Dublin, Hodges and Smith; Edinburgh, Williams & Norgate.

The eleventh number of this useful and improving Journal contains the following papers:—

Reviews.—'Popular History of the Palms and their Allies;' by B. Seemann. 'On the Variation of Species;' by T. Vernon Wollaston. 'Natural History of the Animal Kingdom;' by W. S. Dallas. 'June: a Book for the Country in Summer Time;' by H. T. Stainton. 'Shells and their Inhabitants;' by H. and A. Adams. 'Introduction to Entomology;' by W. Kirby and W. Spence: seventh edition. 'A Re-arrangement of the Nomenclature of British Coleoptera,' Part I. Geodephaga—Phylhydrida; by J. F. Dawson and Hamlet Clark. 'The World of Insects: a Guide to its Wonders;' by J. W. Douglas. 'Practical Hints respecting Moths and Butterflies;' by R. Shield. 'Manual of Entomology,' Vol. III.—IV.; by Hermann Burmeister. 'The Natural History of Ireland,' Vol. IV.; by the late William Thompson.

Societies.—Dublin Natural History Society:—Remarks on the Fungi of the South-west of Ireland; by W. Andrews, Esq. On the Genus Skua; by Chas. Farran, Esq., M.D. On the Occurrence of Rare Birds in Ireland; by Lord Clermont. On Asplenium Trichomanes; by W. Andrews, Esq. On the Occurrence of the Egyptian Goose (*Chenalopex Egyptiacus*) in Ireland; by R. J. Montgomery, Esq. Remarks on some Birds that usually visit Ireland; By J. R. Kinahan, Esq., M.B. On the Natural Affinities of the Genera Botrychium and Ophioglossum; by J. R. Kinahan, Esq., M.B. Sparolegnia Ferox attacking Gold Fish in Vivaria; by Dr. Frazer. Change of Colour in a Fowl; by R. P. Williams, Esq. Journal of the Dublin Geological Society:—Report of the Council for the year 1855. Donations to the Library since February, 1855. On the Geology of the Lake District of Killarney; by Geo. V. Dukoyer, Esq. Researches among the Palæozoic Rocks of Ireland, with a view to determine the Limits of the Old Red Sandstone, and its Relation to the Inferior Rocks; by John Kelly, Esq. Tabular List of Localities in Ireland where Junctions occur of Old Sandstone with the Rocks that lie beneath it; by John Kelly, Esq. On the Lower Carboniferous Beds of the Peninsula of Hook, County of Wexford; by the Rev. Saml. Houghton, M.A., Professor of Geology in the University of Dublin.

Serials.—*America*:—'Smithsonian Contributions to Knowledge,' Vol. VII. 'American Journal of Science and Arts,' Vol. XXI. 'Canadian Journal,' New Series, Parts I. and II. *Russia*:—'Bulletin of the Moscow Society of Naturalists,' Vol. XXVIII. 'Archives of Natural Science for Livonia, &c.,' Series 1, Vol. I. Part 1, and Series 2, Vol. II. Part 1. *Germany*:—'Transactions of the Imperial Academy of Naturalists, Suppl. to Vol. XXIV., and Vol. XXV. Part 1. 'Transactions of the Berlin Academy' for 1854. 'Journal of Scientific Zoology,' Vol. VII. 'Archives of Anatomy and Physiology' for 1854 and 1855. 'Transactions of the Imperial Geological Institute.' 'Annual (Report?) of the Imperial Geological Institute.' 'Journal of German Geological Society,' Vol. VI. Part 4, and Vol. VII. Part 1. *Switzerland*:—'New Memoirs of Swiss Society of Natural Science,' Vol. XIV. 'Bulletin of Vandois Society of Natural Science,' Vol. IV. No. 32—35. 'Memoirs of Genevese Society of Natural History, &c.,' Vol. XXIV. Part 1. *Holland*:—'Journal of Natural Science for Dutch India,' Part. III. No. 3—6. *France*:—'Archives of the Museum of Natural History,' Vol. VIII. Part 3. 'Bulletin of the Geological Society of France,' Part XIV. *Britain*:—'Edinburgh New Philosophical Journal,' No. VI. 'Annals and Magazine of Natural History,' No. C.—CI. 'Quarterly Journal of Microscopical Science,' No. XV. 'Zoologist,' No. CLXII.—CLXIV. 'Transactions of the Entomological Society of London,' New Series, Vol. III. 'Note on Mr. Newman's Memorandum on the Wing-rays of Insects.' Hooker's 'Journal of Botany,' &c.. No. LXXXVII.—LXXXIX. 'Phytologist,' New Series, No. XII.—XIV.

In the notice of my 'Memorandum on the Wing-rays of Insects' Mr. Haliday has some very amusing remarks. Although the paper is anonymous, I fix at once on Mr. Haliday as the author, because the necessary erudition and the power of writing such good English are not combined in any other living entomologist. I should perhaps attempt a reply in the same good-natured strain, but that neither my views nor Mr. Haliday's strictures thereon appear in the pages of the 'Zoologist.' One point, however, admits of a comment: Mr. Haliday tells us he rubbed his eyes because I suggest the name of "ray" for a part which I conceive to be the analogue of "bone." I may inform Mr. Haliday that it is a dangerous experiment to transfer the name of parts from an endosteate to an exosteate structure. Thus, when the late popular Professor of Zoology in King's College called the antennæ of insects "ears," there were very disagreeable allusions to long ears, repeated *ad nauseam;* and even the learned Kirby, when he called a certain part of an insect the "nose," was not secure from witticisms having an occult reference to the Pope of Rome. Therefore, although the use of the rays may be supposed precisely identical with that of bones, still the term "bones" would be a dangerous one to adopt. The hay-making machine performs the work of a dozen women; but it would be rather an innovation to call it "twelve women." When Mr. Haliday has given his eyes another rub, we shall, I am sure, agree on this question, as we already do on the affinities of Stylops, Thrips and Pulex. I have trusted to inquiry alone, and not to repetition, for the confirmation of my views.

Entomological Botany (with more especial reference to the Plants frequented by the Tineina). By H. T. STAINTON, Esq.

(Continued from page 5139).

Cratægus Oxyacantha. Hawthorn.

Few plants are more extensively patronized by the insect tribes than the hawthorn. It has not, it is true, as many admirers as the oak; but compare the size of the hawthorn bush with the oak tree, and it will be found that the former, in proportion to its size, affords pabulum to a larger number of species.

Speyer enumerates the following species as feeding on the hawthorn:— Aporia Cratægi, Porthesia auriflua, Gastropacha quercifolia, Lasiocampa Quercus, Trichiura Cratægi, Pœcilocampa Populi, Eriogaster Lanestris, Clisiocampa neustria, Diloba cæruleocephala, Acronycta Psi, A. tridens and *A. Euphrasiæ*, Amphipyra pyramidea, *Miselia culta,* M. Oxyacanthæ, *Catocala paranympha,* Rumia Cratægata, Ennomos lunaria, E. illunaria, E. illustraria, Chlorochroma viridata, *C. bupleuraria,* Hibernia defoliaria, H. aurantiaria, H. leucophearia, Nola cucullatella, Tortrix lævigana, Myelois advenella, and Scythropia Cratægella. (The species of which the names are in Italics have not yet been found in this country).

It must, however, be evident, at a mere glance, that this is only an infinitesimally small portion of the actual number of hawthorn-feeders. Speyer only mentions one Tinea; and if we find, on closer scrutiny, that instead of one there are already 24 species known as feeding on the hawthorn, will not the inference be strong that the *one* Tortrix might be multiplied in a similar proportion.

In going through the Tineina systematically we find that the very first species, Exapate gelatella, is, according to the observations of Madame Lienig, a hawthorn-feeder. The next hawthorn-feeders we come to are the two Swammerdamiæ cæsiella, and Pyrella. Both are lively larvæ, feeding in webs on the surface of the leaves. Scythropia Cratægella is on several accounts an interesting species, of which it was only during the last month that I made the personal acquaintance in the larva and pupa states. The larva is gregarious; that is, where you find one you will generally find a hundred at least. They make slight webs along the branches of the bush on which they reside; and the bush, from the number of brown, half-eaten leaves, has a blighted appearance. The larvæ are very sluggish, and cannot easily be made to run; thus they differ very greatly from the larvæ of the genus Swammerdamia. The pupa is suspended loosely in the common web, and, as is frequently the case with unenclosed pupæ, is angulated almost as conspicuously as the pupa of Bedellia. The next genus, Hyponomeuta, also furnishes one hawthorn-eating larva, that of Padellus. Of this the pupa, as is well known, is enclosed in a cocoon, and is rounded. The larva of Phibalocera Quercana is so polyphagous that I have no doubt it feeds readily on hawthorn. It is found in June, generally on the under side of the leaf, beneath a slight web. No Depressaria feeds on hawthorn. Of the Gelechiæ, vulgella feeds between united leaves in April; leucatella at the end of May and beginning of June; but up to the present time we are not aware of any other species of the genus that attacks the hawthorn, though it is not improbable that the apple-feeding Rhombella and pear-feeding Nanella may also pay their respects to the hawthorn.

When a hawthorn hedge is trimmed the hedger generally gives the branches a few snicks before he succeeds in cutting off the part he wishes to remove. These neatly-made clefts in the branches are *treasure-trove* to the female Dasycera sulphurella: she deposits her eggs in them; and the larvæ, when hatched, find themselves in a species of paradise; the walls of their chink in just that incipient stage of decay that the epicure likes for his venison. Man is not the only animal that likes the process of putrefaction commenced in his food before transferring it to his stomach, and so the larva of D. sulphurella feasts greedily on the rotting wood of the hawthorn. It is probable that several of the Œcophora larvæ are willing to participate in the dainty meal of D. sulphurella; but as yet we have not obtained any species from the twigs of the hawthorn.

In the genus Argyresthia we know of at least one species, Nitidella, which feeds in the shoots of hawthorn. The full-fed larvæ may frequently be noticed swinging to and fro as they descend by a thread to the ground in the month of May. Of the genus Ornix one species, Anglicella, feeds in the cones which it constructs on the leaves of the hawthorn.

The genus Coleophora is sufficiently represented among the hawthorn-feeders. As soon as the fresh leaves are expanded in April, Nigricella comes forth from the crannies where he had spent the winter, in spite of all the eager glances of the tom-tits desirous of descrying his whereabouts; and after breaking his long brumal fast it suddenly occurs to him that his old coat is shabby,—that now the summer fashions are coming in, and he ought to have a new one; so he sets to work with that determined will which urges all people who are in pursuit of finery, and eats out sufficient of a blotch near the base of the leaf to form a new coat, and, leaving his old curved one attached to the leaf behind him, he struts away in a spick and span new straight one, evidently thinking himself the "admired of all admirers." The brown blotches on the leaves by the middle of May sufficiently betray the abundance of the species and the appetite of each individual.

In July the leaves are again noticed to be blotched; and to the scrutinizing eye the blotch will appear of rather a different colour to that caused by C. nigricella; moreover, the case, instead of being straight, is one of the drollest forms of garment which any caterpillar constructs. Conceive a small hawthorn leaf, of a brown colour and folded down the middle, and the caterpillar living in one half of it, for the other half is apparently a superfluous piece of luxury, all for show and not at all for use: this is the case of C. siccifolia. In Au- conspicuous cases of C. paripennella, which are placed almost flat gust and September we find the less upon the leaf.

The larva of Laverna atra (the white variety) feeds in the haws, in September and October; it has, however, not yet been sufficiently investigated.

Of the genus Lithocolletis two species feed on the hawthorn, one mining the upper side of the leaf (L. corylifoliella), the other the under side. This last has always gone here by the name of Pomifoliella; but recently Professor Frey has endeavoured to distinguish it from the apple-feeding species, and has applied to it the name of L.

Oxyacanthæ. Whether this distinction is one which will be generally adopted, yet remains to be seen.

H. T. Stainton.

Mountsfield, Lewisham,
July, 1856.

A List of the Birds of Banffshire, accompanied with Anecdotes. By Thomas Edward, Collector of and Dealer in Natural-History Specimens at Banff.

(Continued from page 5122).

The Sparrowhawk (*Falco nisus*). This is another daring indivividual. When standing on our links, not very long since, and speaking to one of our keepers, something struck me on the breast and fell to the ground. Instantly, and like a flash of lightning, down rushed a sparrowhawk, which, picking up a thrush from betwixt us, rose again with his booty, and winged his aërial course in safety, and was out of reach before either of us had time to attempt to arrest his progress, notwithstanding we had a gun each ready for action. Was not this a daring fellow? He well deserved to escape as he did, although the keeper grumbled a good deal at our seeming stupidity. On another occasion that came within my knowledge a sparrowhawk, whilst passing the mansion-house of Eden, near this place, dashed through a window at a canary bird hanging in a cage, and succeeded in killing the little favourite before assistance could reach the murderous scene, although several individuals, attracted by the falling fragments of glass and the screams of the poor sufferer, were almost instantly on the spot. It is almost needless to add that hawky paid the penalty.

The Kestrel (*Falco Tinnunculus*). This mouse-, insect- and caterpillar-eating bird, or hawk if you will, is one of the commonest of the tribe with us. It is miscalled the sparrowhawk here by most people, gamekeepers and all; the term kestrel being seldom, if ever, applied. I remember, when a boy, keeping, amongst a host of others, several of this species; I also recollect that when a mouse, a young rabbit, a leveret, or a middle-sized rat, and a bird were presented at the same time, either of the former were sure to be pounced upon, whilst the latter invariably lay unheeded. Since then, and during about thirty years of taxidermal practice, having in that time preserved a good round number, all of which I likewise dissected, I have very seldom, very seldom indeed, found anything but the remains of the smaller quadrupeds, insects (chiefly beetles) and caterpillars in their stomachs; yet this poor bird is persecuted here with as much vigour and pertinacity as any of the most destructive kinds. It may be that they all, at times, meddle with feathered flesh, even in the shape of some of the game species; but I should say that that was very seldom, and even then under very peculiar circumstances. Prejudice, however, is a strange and stubborn thing, and not easily rooted out; so that our keepers, whose ignorance teaches them no better, must and will have their own way. I do not mention these things as anything new, but merely to throw in my humble mite in favour of the bird, in the hope of being, with others, the happy and instrumental means of at least saving it in some measure, if not altogether, from the unwarranted persecution to which it is in general subject. A pair of kestrels built for several years in a dove-cot belonging to an acquaintance of mine, and seemed to live on the most friendly terms with the pigeons, never seeking to harm any of them, young or old. In the old castle of Boyne, too, a few miles from this place, a pair generally breed every season amongst jackdaws and pigeons; and they, also, appear to live on the very best of terms with their neighbours.

The Goshawk (*Falco palumbarius*). If you were to ask our keepers and gunners generally about this bird, they would tell you that they meet with it pretty often; but if you were to come to closer quarters with them, and demand a sight of these so-called goshawks, you would find that in nineteen cases out of twenty they would prove to be nothing more nor less than female sparrowhawks or some species of buzzard. The goshawk, however, that is the real goshawk, has been seen, and even obtained, within our boundaries; but it is very rare. One was procured at or near Tomintoul, in 1836; another at Ellintore, a few years later; and a third shot from the roof of a house in Macduff, in 1840; these being, so far as I am aware, all that have been obtained here.

The Kite (*Falco milvus*), said to be once plentiful here, is now but very seldom seen. Like the good old times, it may be said to have gone,—gone, and no one knows whither.

The Buzzard (*Falco buteo*). Occasionally met with.

The Roughlegged Buzzard (*Falco lagopus*). More frequent than the last. One in my own collection was killed on the hill of Durn, about fourteen years ago; and one, now in the Banff Museum, was shot at Farglen, the seat of Sir Robert Abercromby, in 1854. The nests of both this and the preceding species have been found here, but very rarely.

The Honey Buzzard (*Falco apivorus*). A still rarer species; but that they have been met with there is no doubt. A most splendid specimen was shot at Gamrie, a few years ago, by a Mr. James Docker, of that place. All these larger birds are generally termed "gleds" with us.

The Marsh Harrier (*Falco æruginosus*). A specimen was killed at Farglen about sixteen years since.

The Hen Harrier (*Falco cyaneus*). Occasionally. Females and the young of the year most frequent. The male is known here by the names of gray, blue and lead hawk; the female by the name of ringtail.

Ashcoloured Harrier (*Falco cinerascens*). I do not remember ever seeing more than one of this species, which was procured here. It was a first-rate specimen, a male and an old one, a very pretty bird.

The Longeared Owl, Horned Owl (*Strix otus*). Plentiful. I once found a nest of this bird with eggs in the month of March, I think about the middle.

The Shorteared Owl, Woodcock, or Grass Owl (*Strix brachyotus*). A migrating species with us. Specimens are annually met with by our sportsmen and keepers when out shooting rabbits, snipe and woodcocks.

The Barn Owl (*Strix flammea*). This, I am told, is a pretty common species in England. With us it is not so, but must rank as very rare. I know only of four being procured here within the last twenty-two years. One of them is in my own collection; and George Donaldson, Esq., of Glasgow, has another, which he shot on the estate of Durn, in this county, a short time since.

The Tawny or Brown Owl (*Strix aluco*). About in equal numbers with him of the long ears. I have known these birds to have had eggs by the middle of March.

The Snowy Owl (*Strix nyctea*). One of the most magnificent of all the owl tribe. What a splendid and showy bird! I think the term "glistening" or "spangled" might, with all truth and justice, be applied to this shining species. What a noble-looking bird! What beautiful eyes! the pupil dark, and the iris like two rings of the finest burnished gold, set, as it were, in a casket of polished silver. I am glad, nay, proud, of being able to give this king of British owls a place in my list, and of being able, perhaps for the first time, to say that at least one pair have been known to breed within the district. A few miles west of Portsoy,* and not far from Cullen, stands the bold and tawny form of Loggie Head. In connexion with this rocky promontory, and about midway up its rugged height, there is a narrow cave or chasm, called "Dickie Hare." In this cave a pair of these owls bred in 1845. Unluckily, however, for them, a party of fishermen belonging to Cullen, returning one morning, in the summer of the year just mentioned, from their vocation rather earlier than usual, discovered their retreat, by observing one of the birds go in. This was too much to lose sight of, so up the dangerous and jagged precipice scrambled one of the crew, and managed to reach the aperture where the bird disappeared; but instead of only one, as he expected, he was not a little surprised to find that he had four to deal with, two old and two young ones, well fledged; and the apartment was so narrow that only one person could enter at a time, so that help was out of the question; and his ambition grasped the whole. What was he to do, or what could he do? Turn, and then the birds would have flown. Oh, no! but, just as I would have done had I been in his place, he set upon them all; and, after a prolonged and pretty severe battle, in which he got himself a good deal lacerated and his clothes torn by the claws of the birds, he succeeded in capturing them all alive, except one of the young ones, which fell a sacrifice to the struggle. The state of excitement which the little town was in as the man landed with his prizes, and the news of his morning's achievement spread, may in some measure be imagined, but it can hardly be described. They were sold, I believe, a few days afterwards, to a doctor; but what became of them afterwards I could never learn.

The Little Owl (*Strix passerina*). I give this bird a place here on the authority of a Mr. Wilson, late of this town, who says he saw one in a wood near this place·

T. Edward.

Banff, June, 1856.

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* Not Portsay, as printed in the 'Zoologist' (Zool. 5118).

Zoology from the Seat of War.—I was yesterday on board H.M.S. 'Sidon,' which arrived at Portsmouth a few days ago from the Crimea. The captain introduced me to the surgeon of the ship, Mr. Courtenay, who kindly showed me the living contents of his cabin, which consisted of a magnificent eagle-owl, another owl rather smaller than brachyotus, and which I do not know, and a hobby which had flown on board and been captured in the sea of Azoff. The eagle-owl was obtained on shore, I think at Kustendji; it was very slightly wounded, and was captured before it recovered itself; it has been two years on board the ship, and is an immense favourite with Jack, who has tamed it to perfection: I never saw a more thoroughly gentle and domesticated creature; it allowed itself to be lifted by its wings to show its terrific talons, and seemed to like being stroked as much as a cat does; its magnificent eyes showed to great advantage in the gun-room where there was *not too much* light! The owner had a clever way of carrying it, which the bird seemed quite to understand: it was by taking hold of the outside toe of each talon and then lifting the bird, which did not contract its talon or attempt to support itself by grasping hold of the hand; this struck me as being not the least interesting trait in its education: it flew back through the door of the gun-room to its station with the usual easy flight of its genus. The duties of the commissariat, viz., of providing raw fresh meat for so large a bird were, especially when on detached duty in the sea of Azoff, attended with considerable difficulty: it was never put on "ship's allowance," and has cost its owner more than £10 for fresh meat. In cold weather gulls could generally be shot near the ship, but they never approached in warm weather, and then, if cruising, a live stock of poultry had to be laid in, which at all events could be converted to good use if the gulls turned up again. The poor hobby, though in good plumage, did not seem to appreciate so well as the owls the luxury of a cabin in which he could not be seen without a candle. Mr. Courtenay had pinned a few insects too about his cabin, amongst which I noticed A. Atropos, Cynthia? Cardui, Arctia Hebe, &c., and he had also some live trap-door spiders and their houses; I think he said from Corfu: these are very large, the door being I should think near an inch in diameter; they appeared to be exactly like some which I have from South Australia. I have omitted to say that four out of a number of nightingales obtained in the Crimea survived the voyage: this fact gave rise to a rather amusing mistake, for just as I was going on board the ship I was told by a person on shore most seriously and gravely, "Oh, Miss Nightingale is on board the 'Sidon,' she has come home in her, incognito; however I dare say you will see her." I had forgotten this "shave" until the mention of the birds reminded me of their not less notable synonym.—*William Henry Hawker; Horndean, Hants, July* 22, 1856.

Occurrence of the Rose-coloured Pastor and Woodchat Shrike in Hertfordshire.—The rose-coloured starling was shot in this parish on December the 20th, 1855, a very unusual time for its occurrence in England. Although it did not appear at all wounded, yet it may possibly have been injured in some way, so as to be incapable of performing a long flight. It had been seen two or three times, previously to its being shot, in some open fields, on fallow, and near flocks of other birds—starlings, &c. It is a male bird, and seems to have been changing its plumage, as the rose-colour on the back is mixed with dirty brown, and the black feathers on the head and neck are edged with light brown: this bird was preserved for me, and is now at Mr. Leadbeater's, in Brewer Street. The woodchat shrike was shot near this place early in the spring, but I could not ascertain the exact date. The person who shot it was out late one evening when it was nearly dusk, and saw the bird on the hedge close to him: he drew back a little and fired at the place where he had seen it; but being so near and having a large gun, he shot off all the tail and otherwise injured it. He thought that he had spoiled the bird so much that it could not be stuffed, but thinking it uncommon, kept it by him just as it was for some time; when Mr. Norman, a bird-stuffer, at Royston, saw it, and knowing its value took it home with him to try to set it up, although it was then getting decayed, in addition to being so badly shot. A female merlin also was shot here during the winter: this bird is a pretty constant winter visitor with us, and in the severe winter before last I obtained a very fine adult male bird.—*Edward J. Tuck; Wallington, near Baldock, Hertfordshire, July* 21, 1856.

Anecdote of Swallows.—The following facts are given as related to me by my son:—Towards the latter end of May a pair of house-sparrows having at Hampton Wick imprudently taken possession of a martin's nest of the previous year were attacked by the former owners, which endeavoured at first to drive out the intruders, but failing in doing so, in consequence of the determined and obstinate resistance met with, they proceeded to build up the entrance, which they speedily accomplished, for on the nest being inspected two days later no aperture was to be seen, and a sparrow was heard chirping from within; but on the following morning both nest and sparrow had totally disappeared, the imprisoned bird having apparently in its struggles to escape brought the whole fabric to the ground, leaving the martins in quiet occupation of the much-coveted site whereon to re-erect their frail mansion, which was immediately rebuilt, and in due course they succeeded in hatching and rearing their brood.—*R. W. Hadfield; High Cliff, Ventnor, Isle of Wight, July* 1, 1856.

Tubercular Excrescences of the Hedgesparrow.—Although the excrescences about the bill and eyelids of this bird have been frequently noticed, I am not aware that any author has described them as extending to the whole of the toes of both feet, but such was the state of one brought to me; its toes were literally almost covered with them, some of the size of a pea or larger, and being pendulous gave to the feet an unsightly and deformed appearance. I have yet to learn whether these excrescences are common to the hedgesparrow throughout the country. Although birds are not, that I know of, similarly afflicted in the east, men are. At Cochin legs of a prodigious size are not uncommonly seen, resembling those of the elephant, from which they derive their appropriate name.—*Id.*

Attack on a Cat by Hedgesparrows.—Although it is a well-known fact that most birds will, in defence of their young, expose themselves to great danger, it appears almost marvellous that so small and gentle a bird as the common hedgesparrow should be so totally regardless of it, as the following extract from my note-book would seem to prove:—May 17, 1852, at 8 o'clock, A. M., the attention of my son was attracted by an unusual fluttering and screeching noise under his window, on looking out of which he observed, to his great surprise, two hedgesparrows in the act of attacking a cat, flying at and dashing past and about it in all directions; this being repeated several times so bewildered and disconcerted Grimalkin, that apparently finding discretion the better part of valour, beat a hasty retreat, leaving its brave little opponents masters of the field. The young birds being unable to fly, (having only quitted their nest on the previous day), were compelled to take refuge beneath a thick privet.—*Id.*

Egg Prodigies.—During my residence at Peterhead, N. B., between the years 1850 and 1853, a goose laid a similar "prodigy" to that mentioned in the 'Zoologist' (Zool. 5123): it was exhibited for a long time in a butcher's shop there: I carefully examined it before the opening was made large enough in the *outer shell* to remove the *inner egg:* unfortunately I cannot just now turn up my notes: a full account of it was published at the time in one of the Aberdeen papers. The following was published in the 'John O'Groat Journal' of the 20th ult.:—"*Curious Circumstance.*—Some weeks ago there was found in the nest of a 'heady craw,' on the island in the loch of Stemster in this county, an egg more than double the size of the ordinary egg of that bird, but in all other points of resemblance—in shape, tint and spots—exactly the same. For some time it was allowed to remain in the nest, in the expectation that the bird might be generous enough to continue the practice of laying eggs of the same dimensions, but on no more being found it was ultimately carried away and boiled, when, to the surprise of the individual who applied his spoon to the shell, it was found to contain not only a fair amount of edible matter in the form of yolk and white, but likewise a fully formed egg of the ordinary dimensions, with a shell of the usual thickness and colour. There were, in fact, two single eggs rolled into one, but by what agency or process it is impossible to say." The editor has most kindly given me the rarity; unfortunately it was much crushed in its transit to the news office: to preserve it from further injury I have put it into spirits. It was fortunate the finder had an egg-eating propensity; and thus boiling it has fixed the inner egg in the hardened white. The outer egg has a nice yolk, which peers out from the fracture made on the side for the spoon, and thus the inner egg is nicely exposed. The outer egg is as stated unusually large, light coloured, and of good shape; the inner one much darker, and obtuse at both ends. It must be understood that the bird called "Heady Craw" in Caithness, is not the Corvus cornix, "Hoodie Craw" of Aberdeen, or "Scaul Craw" of other parts of Scotland, but the black-headed gull, "Larus ridibundus" of Yarrel. —*Charles William Peach; Wick, N.B., July* 8, 1856.

Description of a supposed new Skenea: occurrence of Crenella costulata and Modiola phaseolina in Mounts Bay.—Through the kindness of Spence Bate, Esq., I am enabled to send you an account of an extremely minute Skenea which I found in sand, taken amongst Corallina officinalis from rock pools at Gwyllyn Vase, near Falmouth. It is involute like Skenea nitidissima, and equally umbilicated both above and below; but the whorls, which are three instead of two and a half as in that shell, do not increase quite so rapidly in size: its distinctive feature consists in having three spiral ribs or carinæ of a shining fulvous tint which contrast strongly with the whitish ground-colour of the shell; one is situated on either side, extending from the apex to the orifice, and the third, which is not so distinctly elevated, on the centre of the body. The entire volutions appear under a good lens distinctly wrinkled longitudinally, more especially on the inner side, and under a still higher power finely striated spirally: the mouth, which is well rounded and does not turn to either side, embraces a considerable portion of the body whorl: the operculum I have not been able to examine: the diameter hardly equals the twentieth of an inch. As yet I have only obtained four specimens, but have still some small portion of the sand in which they are found remaining unexamined. If the shell as described above is already known, I should feel greatly obliged if any of your scientific correspondents would favour me with the name. I am borne out in my opinion that it is new to the British Fauna by Dr.

Battersby, of Torquay, who has kindly examined the shell: should it prove equally new to science, Skenea tricarinata would be a very appropriate designation. It may be interesting to some of your readers to know that I met with several fine specimens of the rare Crenella costulata in rock pools in Mounts Bay, and also Modiola phaseolina in some abundance in the same locality.—*W. Webster; Upton Hall, near Birkenhead, July* 21, 1856.

"Do the Males of certain of our Lepidopterous Insects," &c., &c. (see Zool. 5149).—Under the above title Mr. Stone gives the entomological world something new, but, unfortunately, far from being a fact. In the first place, I deny the assertion that any Lepidopterous chrysalis, female, attracts the perfect male: it is contrary to common sense. Would the male wait till the female expanded her wings? Certainly not: females call the males before they come. As regards prodromaria, I have taken a great number of specimens during the last few years, and reared as many others from the ovæ. That Mr. Stone found a worn male at the foot of an oak is ever so likely, and that he found a female there afterwards was merely a case of good luck; and no doubt, had he visited the same tree the following afternoons, he might have taken both males and females newly emerged from the chrysalis. I have done this for several days in succession; and why? If we find a prodromaria fresh from the chrysalis, a brood must be about. I have often taken four or more specimens stretching on a tree. A female prodromaria, like other species, does not call the males unless she is inclined; and, moreover, the males are not always inclined to come at her desire. I have taken several females into the woods at dusk. They have called and waited till 2 A. M. before any males made their appearance, and sometimes none at that time. This season many males came soon after dusk on a moonlight night. Like sugaring, it is an uncertain game. The best plan is to take the males into the wood, pin them on a tree away from the outside, or the bats will certainly make a meal of them; visit them the next morning, and you will find most of them *in coitu.* Female prodromaria, like other species, may not be inclined to call the males. The day they emerge from the chrysalis this is not at all uncommon. Mr. Stone is so eloquent in describing the loves of insects and animals, that I am sorry he was not present with me, a few days ago, in a field where M. Artemis abounds. He would there have seen a male and female *in coitu*, and three or four males clustered upon them. Why they were so foolish, perhaps Mr. Stone could have explained with more delight to the readers of the 'Zoologist' than I can. I think it was a case of exhaustion; for I observed several females, like Mr. Stone's hedgehog, dodging the males. The female evidently had not met with the one that suited her fancy; and some skill was required to evade the attentions of three or four males at the same time.—*R. S. Edleston; July* 8, 1856.

Early appearance of Vanessa Atalanta.—During the first week of the present month I was surprised to see flying in the path on the west side of Nunhead Cemetery several specimens of Vanessa Atalanta; I saw three caught, so I have no doubt of the species: I have never seen or heard of Vanessa Atalanta being out so early, and therefore I think, perhaps, the fact may be worth noting.—*T. Wildman; Grove Place, Camberwell, July* 23, 1856.

[It is uncommon for the new brood to appear so soon, and a specimen which

I have examined, taken at the same date, had evidently been some weeks on the wing. Can Mr. Wildman give any information as to the state of his specimens?—*E. N.*]

Aporia Cratægi in Kent.—I had the pleasure of seeing this insect on the wing for the first time on the 12th inst., and took ten specimens in good condition.—*H. A. Stowell; Faversham, July* 21, 1856.—[*Intelligencer.*]

Aporia Cratægi.—Whilst riding out to-day I caught a very fine specimen of A. Cratægi in one of the Minster Lanes. I caught two others about three weeks ago in Herne Park.—*R. F. Turnbull;* 4, *Chatham Place, Ramsgate July* 21, 1856.—[*Id.*]

Colias Hyale.—A very fine specimen of Colias Hyale was taken at Lavant, in Sussex, on the 25th of June, after a hard chase, by a friend of mine, who has just given it to me. Polyommatus Argus is now abundant in this locality.—*Wm. Buckler; Lumley Cottage, Emsworth, Hants, July* 15, 1856.—[*Id.*]

Capture of Trochilium Chrysidiforme.—On the 13th instant I captured two fine specimens of this pretty and rare species between Folkstone and Dover. A few days afterwards I paid the locality a visit, and took one more. I was unsuccessful on my first visit, on the 1st of the month; and on my last, a few days since, it rained.—*Samuel Stevens; Bloomsbury Street, London, July* 25, 1856.

Trochilium Cynipiforme.—I have been on the search for this truly beautiful little clear-wing for the last fortnight. On the 13th I saw several of the pupæ-skins projecting from the bark of oaks, between the magazine and the barracks in Hyde Park, but saw none of the imago. A young man who collects for profit very freely showed me one out of four that he had taken. I went to-day and had the good fortune to capture five males and two females; three or four others were collecting and took four or five each: one young gentleman told me he had taken thirteen on Monday, so that the insect may be considered plentiful this year, notwithstanding the avidity with which it has been hunted for years past. No wonder that some insects become rarer, or get exterminated, when ruthless collectors take whole broods of larvæ, pupæ by the gross, and the perfect insect by hundreds! I always read with regret of wholesale captures of insects any way approaching to the rare. One of my Trochilium Cynipiforme was on the wing and settled about two feet from the bottom of an oak, and by the movement of the abdomen and running over the bark appeared to be depositing her eggs. I watched her for some time and then captured her, after which I took her to Kensington Gardens and liberated her on an oak tree. To-morrow I shall go to the Park, and if again successful in taking Cynipiformes shall liberate most of them in Kensington Gardens, and see if I can extend the breed of this somewhat scarce insect in a new locality. The best time for collecting this insect is from 10 to 12 o'clock in the day.—*T. R. Oxley; Bayswater, July* 15, 1856.—[*Intelligencer.*]

Strange Habit of Lasiocampa Trifolii.—Contrary to your theory, this larva *does* burrow: I saw one to-day nearly under the soil, and some time after I looked and it was quite gone. On examining the soil I found several cocoons, some with, others without, a loose cocoon of earth outside the cocoon proper.—*S. Bingham; Bank, Newnham; July* 15, 1856.—[*Id.*]

Occurrence of Drepana Sicula near Bristol.—You will be interested to learn that after the lapse of twenty-one years this insect has occurred in Leigh Woods: it was taken last week by my friend Mr. H. Bolt. We have looked after more pretty keenly; but up to the present time none have been found.—*George Harding, jun.; Stapleton, near Bristol, June* 27, 1856.—[*Id.*]

Capture of a second Specimen of Platypteryx Sicula near Bristol in 1856. — On the 5th of July I was fortunate enough to capture a male specimen of Platypteryx sicula on the wing in Leigh Woods, being the third known British specimen.—*Philip H. Vaughan; July*, 1856.

Botys Terrealis (Lep.) — I have succeeded in breeding several of this insect from larvæ collected, last September, in N. Wales. The larva feeds on Solidago. It is slender, pale green, and feeds in a loose web on the under side of the leaves. When full-fed it forms a strong web-like cocoon, in which it remains during winter, changing to pupa in spring, and emerging in the imago state about the middle of June.—*G. A. Almond; Birkenhead, July* 19, 1856.—[*Intelligencer.*]

Omission in Mr. Doubleday's List of Eupitheciæ.—In copying the list of Eupitheciæ for the 'Zoologist' one species was accidentally omitted, *viz.*, E. Centaureata. It will come in between E. expallidata and E. succenturiata, as below:—

27 bis. Centaureata, *W. V., Haw. Wood*, 679.

—*Henry Doubleday; Epping, June* 6, 1856.

Occurrence of Limacodes Asellus near Brockenhurst.—On Saturday last I received a fine unset male of this rare Lepidopterous insect; it was taken the previous day by Mr. Charles Turner, near Brockenhurst, New Forest, Hants: my friend, Mr. Samuel Stevens, likewise received a fine pair (male and female) from the same party.—*A. F. Sheppard; Rutland House, Kingston-on-Thames, July* 7, 1856.

Occurrence of Graphiphora Ditrapezium in Dorsetshire.—In July, 1853, two fine specimens of this beautiful and rare insect were taken here by myself; also one specimen in July, 1855: it has again been taken here this season by myself and Mr. F. Bond.—*O. P.-Cambridge; Bloxworth, near Polandford, Dorset.*

Late appearance of Cucullia Chamomillæ.—One of my children captured yesterday a fine female of this species, which evidently, from the freshness of its appearance, had but recently emerged from the pupa: this appears remarkable, as I found full-fed larvæ on the 29th of June, which descended on the following day; others had been taken prior to that period and some are still feeding, Mr. Reading, of Plymouth, having taken some yesterday.—*W. H. Hayward; Devonport, Devon, July* 18, 1856.

Captures of Lepidoptera at Pembury, Kent. — I have taken the following species during the last week in June and the first in July, viz., Crambus uliginosellus, Botys lancealis and Pionea stramentalis, flying together on a boggy side of a hill known as the Miller's Wood; the two latter occurred more commonly in the lowest ground, and the first in an open space where the asphodel and sundew grew in great profusion amongst the sedges and rushes; the females, when on the wing, looked whiter than Pascuellus, their under wings being much purer in colour; the males appeared darker, and the broad silvery basal streak was nearly divided into two by a suffused brown line. Macaria notata was not rare, but one out of every three taken had an under wing entirely absent, and one specimen flew tolerably well with both the under wings abortive. Apatela leporina occurred on birch stems. Eupœcilia ambiguana flying about birch bushes in the evening. Ceropacha fluctuosa was beaten from birches during the day. Epione adversaria was scarce and much worn. Zerene albicillaria occurred sparingly on the wing in the evening. Bucculatrix frangulella was common on the Rhamnus frangula. — *J. Jenner Weir; 20, Maismore Square, Old Kent Road, Festival of St. James the Great*, 1856.

Captures of Lepidoptera at Brighton.—Neuria Saponariæ has been rather abundant here during the last week or two: I never before met with it as a common insect. Nearly all that I have taken of this species at sugar have been *females*, and those which I have taken at light have been *males*. Can you account for this fact? I have taken a single specimen of Agrotis cinerea, at sugar, on June 25th.—*John N. Winter; 28, Montpellier Road, July 6, 1856.*—[*Intelligencer.*]

Captures of Lepidoptera in 1856.—The following are the choicest of my captures during the present summer:—

Biston prodromaria. Several specimens.

Aleucis pictaria. Mothed on Dartford Heath, April 12th.

Ennomos illustraria. Two specimens, one of them flying round a lamp near the Erith Station, April 26th.

Notodonta carmelita. Several at West Wickham, from May 4th to 15th, on trunks of birch-trees.

„ dictæoides. Two, May 4th and 9th, on trunks of birch-trees.

„ Chaonia. A single specimen, taken May 11th, on the trunk of an oak.

„ trepida. A single specimen, taken May 15th, on the trunk of a birch.

Ceropacha ridens. Several, May 11th.

Ptilodontis palpina. A single specimen, May 20th.

I have bred the undermentioned species from the larvæ:—

Ennomos illustraria. Several.

„ lunaria. Several.

Notodonta dictæoides. Several.

„ dodonæa. Several.

Stauropus Fagi.

Orgyia gonostigma. Several.

Cucullia Asteris. Several.

Cabera rotundaria. Several.

Notodonta dodonæa, a beautiful variety, from pupæ raked.

„ dictæa. Several, from pupæ raked.

Ptilodontis palpina.

Tæniocampa munda, and others too numerous to mention.—*F. O. Standish; 2, Alfred Cottages, Warner Road, Camberwell, July, 1856.*

Cabera rotundaria.—I have bred several of this insect, which is undoubtedly a distinct species. It is a smaller insect than C. pusaria; the wings are rounder and fuller, and the two lines near the base of the wing nearly meet. I possess specimens that vary in the closeness of the lines, but still they are readily distinguished from the common white wave: I have had a pair *in copulâ*, and trust to have the larva booked. —*Id.*

Notodonta dictæoides, N. dromedarius, and N. camelina.—I am breeding now all three of the species named, from larvæ I took last autumn, although I bred some in April last: surely they have made their appearance too late (July 22nd) to allow of an autumnal brood.—*Id.*

Retinia sylvestrana.—I have bred several of this species from larvæ, taken in the young shoots of the stone pine (*Pinus pinea*).—*Id.*

Capture of two new British Tineæ at Box Hill.—I have taken several fine specimens of Laverna conturbatella and Raschkiella off the Epilobium angustifolium growing on Box Hill, from the 22nd of June to the 20th of July, which shows that they must last a long time, particularly conturbatella, which were fine the last time I took them. Of conturbatella, I have bred four specimens from larvæ which I found spun up in the tops of the flowering spikes of the Epilobium; it is a black and nimble larva. The last time I visited the locality (July 20th) I took several larvæ mining in the leaves of the same plant: as this is a new discovery, the miner may possibly turn out another new species.—*Id.*

Capture of Coleophora conspicuella in Headley Lane.—On the 20th of July I took a remarkably fine specimen of Coleophora conspicuella in Headley Lane: this is the third instance of this rare and beautiful insect having occurred in Britain; the first having been taken by Mr. Bedell, the second by Mr. Stainton and both in the same locality as my own.—*Id.*

On the Habits of Argyresthia glaucinella.— The larvæ of this species feed under the bark of oak and Spanish chestnut; they are excessively local, and only found at the base of trees of enormous size; to wit, out of one thousand oaks, &c., in Dunham Park, I have found them only on one Spanish chestnut and three oaks. The imago pops out from 9 A.M. to 9 P.M., a continual appearance: they rarely rest with the head as a support like most of the species, but place themselves full-stretch on their legs as if ready to bolt; it is all *sham;* nothing is easier than to pop them into a pill-box. I have seen none on the wing; all were at rest. I do not doubt that they have been overlooked, from the strange place of their abode requiring a person to *prostrate* himself to be successful in their capture; they are now out.—*R. S. Edleston; 5, Meal Street, Manchester, June* 28, 1856.—[*Intelligencer.*]

Attractiveness of Glyceria fluitans to Moths.—That this grass, when in bloom, was very palatable to Noctuæ was known to me long ago: and the same fact was also discovered by Messrs. Bedell and Douglas in 1845; but I had certainly no conception till the other evening of the extent to which the flowers of the Glyceria are *sticky.* If you draw your hand several times across a batch of this grass at this season of the year you will find that your fingers are about as sticky as if you had dipped them in a solution of sugar. I do not know that the Glyceria proves attractive to rarities, though many of the commoner species will swarm at it; but it may be serviceable to some incipients to know that the swampy edges of ditches and ponds will furnish them with plants *ready sugared.*—*H. T. Stainton; July* 14, 1856.—[*Id.*]

What the Lancashire Entomologists have to "brag" about. — The following list is hastily made out as an answer to Mr. Stainton's reiterated remarks, that the English entomologists never look for new species until some one has found them. I had thought that the fact of their being found was proof they were looked for; however, as we do look for both new and old things down here, and, as I think, his remarks are not correct, and, therefore, ought not to go on the Continent uncontradicted, I send you the following list of what has been done by Lancashire collectors. Since the first number of the 'Entomologist' was published, it may be said that some of the species named have also been found by the Southern collectors. Granted, and this is greater proof, if any more were wanted, that the English entomologists do look for new species. On reference to the 'Entomologist' and to the list of captures in the early volumes of the 'Zoologist,' it will be seen at once what were considered wonderful captures in those days, and it will also be seen that the things I have named were rarely, if ever mentioned, as having been taken; in fact, many of them are quite new to Britain since then, and some of them new to science, I have confined myself to the work done by the Lancashire collectors, if I had taken the Yorkshire entomologists in (rather a difficult job that), I might have added such things as Opigena Fennica, n. s., Gastropacha Ilicifolia (reputed British), and Agrophila Sulphurea; the last found by Mr. Dunning, &c. I have purposely omitted my own captures, except where friends have also taken the species.

In Butterflies:—Pieris Daplidice. Disputed as British; taken by Mr. Buxton.

Melitæa Athalia. Found from a hint given by a dealer, over his cups.

Sphingidæ, Bombycidæ and Noctuidæ: — A new species of burnet, which I have never seen figured or in any continental collection, and is not yet named.

Chærocampa Celerio. Frequently taken.

Deilephila lineata. Frequently taken.

„ Galii. Taken several times.

Trochilium Sphegiformis. Taken near Chat-Moss.

„ Scoliæformis, n. s. Taken freely by Mr. Ashworth, in Wales.

Lithosia complanula. Made plentiful by Mr. Greening.

„ muscerda. Lost for many years, turned up by Mr. Buxton, in abundance.

Lasiocampa Trifolii. Made common.

Endromis versicolor. Taken.

Semaphora bicuspis, n. s. Bred and captured by J. B. Hodgkinson and Mr. Cooper.

Petasia nubeculosa, n. s. Taken by Mr. Cooper and Mr. Almond.

Notodonta Carmelita and N. dictæoides. When it was disputed as a species.

„ trepida. In plenty, when it was almost unique.

„ Chaonia. At the same time, when there was not a specimen in the county.—*B. Cooke.*

Acronycta Alni.—*Carter & Edleston.*

„ Myricæ, n. s.—*J. B. Hodgkinson.*

„ Salicis and A. Arion. Taken freely by T. Harris.

Ceropacha fluctuosa and C. hybridata. Made plentiful.

Mythimna Turca and Cymatophora Oo. When they were not to be had for love or money.

Leucania littoralis. Found in hundreds when there was not a specimen in our cabinets.

Nonagria lutosa. When it was disputed as British.

Crymodes Templi. A species which J. F. Stephens never had found freely.

Gortyna Petasitis, n. s. Found and afterwards bred.

Miana fasciuncula. Disputed as a species on the Continent, even by M. Guenèe in his great work; taken in profusion, and its standing established.

Luperina Cespitis. Taken and its habits discovered.

„ connexa and L. abjecta. Taken.

„ albicolon. Taken freely, when no one would admit it was distinct, until they saw it in Raddon's collection.

Triphæna fimbria. In hundreds, when it was doubted as British.

Cerigo Cytherea. When it was worth a guinea.

Noctua leucographa. Found.

„ Dahlii and N. depuncta. Turned up.

Noctua Hebraica. Turned up, when worth a Jew's eye.

Chersotis Haworthii and C. agathina. When there was not a specimen of either in any cabinet in the county.

Spælotis Pyrophila and S. præcox. When one was unknown to us, and a wing of the other was preserved in one of the best Southern cabinets.

„ cataleuca and Agrotis saucia. Now in every Lancashire cabinet, were almost, if not quite, unknown in the London cabinets, when they were turned up in the North.

Agrotis obelisca, A. Ripæ, and some other species of Agrotis were found here long before they were taken in the South.

„ Ashworthii, n. s. New to science.

Tæniocampa opima and T. Populeti. New to science.

Orthosia neglecta and O. suspecta. Both made common.

Tethea subtusa. Bred freely, still scarce in the South.

Euperia Fulvago and Cirredia Xerampelina. Taken freely.

Xanthia Gilvago. Got in plenty.

Epunda Lichenea (of doctoring notoriety). Made common.

Noctua sobrina, n. s. Taken by Cooper.

Hadena lutulenta and H. Æthiops. Taken by J. B. Hodgkinson, who also, when in Scotland, first observed H. assimilis, in the hands of a collector.

„ suasa. Found, and made common; first sold at 30*s.* each.

„ rectilinea. Taken; sold for a fabulous price; now plentiful.

Aplecta advena. Got in plenty.

„ ocellata. Frequently taken before Scotland was visited.

„ herbida. Made common, when a wing was esteemed a great prize.

Calocampa vetusta and C. exoleta. When both were supposed to have been imported.

Cucullia Chamomillæ. Taken freely, when it was a puzzle to the greatest English entomologist to separate it from the common species.

Cloantha Solidaginis, n. s. Got in hundreds.

Heliothis armigera. Found.

„ scutosa. Taken by J. B. Hodgkinson and J. Cooper.

Anarta melanopa. Got in plenty.

„ cordigera. In abundance.

Plusia Interrogationis. Found by J. Tinker, &c.

„ Bractea. Discovered in plenty by S. Carter, when it had become disputed as British.

Abrostola Urticæ. Taken freely.

Toxocampa pastinum. Hitherto only in one cabinet in this county, taken.

Catocala Fraxini. Got several times, disputed as British, until A. Lomax took one alive to R. S. Edleston.

Amongst the Pyralidæ, it is only necessary to name the following new species added to our list and made common by Lancashire collectors to close my argument about this family: — Rhodaria sanguinalis, Scopula alpinalis, S. decrepitalis, Botys terrealis, and Shranckia turfosalis.

In Geometridæ less has been done, still quite as much, if not more, than the Londoners have accomplished, viz., new or scarce species :—

Eupisteria carbonaria
„ quinquaria
Nyssia zonaria
Charissa obfuscaria
Gnophos ———, n. s.
Epione parallelaria
Coremia munitaria
Thera variaria
Phæsyle flavicinctaria
Cheimatobia autumnaria
Cheimatobia filigrammaria
„ borearia
Phibalapteryx lapidaria
„ gemmaria

One or two new pugs, and Psodos trepidaria; nearly all these have been made abundant: and the following species have been found and taken freely, though many of them were formerly considered exclusively Southern species :—

Chlorochroma viridaria
Eurymene dolabraria
Ennomos lunaria
„ erosaria
„ fuscantaria
„ tiliaria
Macaria notataria
Biston prodromaria
Boarmia roboraria
„ cinctaria
Cleora glabraria
Coremia erutaria
„ salicaria
Harpalyce picaria
„ popularia
Lobophora lobularia
„ hexapteraria
„ sexalisaria
Acasis viretaria
Melanippe amnicularia
Emmelesia ericetaria
„ tæniaria
Emmelesia bifasciaria
Eupithecia Linaria
„ pulchellaria
„ indigaria
„ innotaria
„ Satyraria
„ Succenturiaria?
and its varieties
Acidalia marginepunctaria
„ Blomeraria
&c., &c.

In Tortricidæ, several new or rare species have been added to the list and "annexed" to our collections, including—

Peronea permutana, n. s.
„ Caledoniana, n. s.
„ lipsiana, n. s.
„ Maccana, n. s.
Spilonota amænana, n. s.
Sericoris herbana
Coccyx geminana, n. s.
„ cosmophorana, n. s.
Retinia pinicolana
Stigmonota lunulana, n. s.
„ Coniferana, n. s.

And many species supposed to be very rare, by hundreds, such as

Amphysa Gerningiana (proved double-brooded).
„ prodromana
Peronea mixtana (the true Schalleriana)
Penthina ochromelana
„ sauciana
Sericoris Daleana
Mixodia palustrana
Euchromia flammeana
„ Arbutana
Cnephasia lepidana (double-brooded)
Bactra furfurana
Sciaphila bellana
Phoxopteryx ramana
Pædisca occultana, n. s.
„ stabilana, n. s.
Ephippiphora turbidana, n.s.
„ signatana
Coccyx ustomaculana and

Heusimene fimbriana; all made common. I could extend this list, but will conclude this family with Argyrolepia Cnicana and A. Schreibersiana, which last was got by Mr. Buxton.

Amongst the Crambidæ :—Chilo Mucronellus. Taken.
Crambus Selasellus. In profusion.
„ latistrius. Made plentiful.
„ uliginosellus. Found by a Lancashire collector in the South.
Heliothis dipsacea and Crambus Warringtonellus. Taken in profusion on our

Mosses. I might lengthen this list, but will conclude it with Mr. Buxton's new Chilo of last year: see 'Annual' for 1856.

I might say a little about the Phycidæ, but as that might bring my own name in, I forbear; the same remarks apply to the Tineidæ, but if our friends doubt the length of the list I could produce of what the Lancashire entomologists have done in this family, let them say so, and I will produce a list so long that they will never again say we do not look for species down here before they have been found elsewhere, and will be bound to grant that we have some right to "brag," in return for which, we will admit we are "precious like Yankees," that is "go-ahead chaps," but must submit that in our "brag" there is very little I. O. W. In conclusion, I respectfully call the attention of the readers of the 'Zoologist' and the 'Intelligencer' to the following old saw,—

"Where there is smoke there is fire."

—*C. S. Gregson; Edge Lane, Stanley, near Liverpool, July* 19, 1856.

Singular effect of Fascination on a Fly. — On my arrival at Nágpur, in Central India, in 1847, I requested that the first scorpion discovered in the house might be allowed to live for a few minutes, that I might have an opportunity of observing its form and movements. In that part of India, one has rarely to wait long for such a visitant, and on an early evening my colleague, the Rev. Mr. Hislop, announced that there was a scorpion on the wall. A lamp was set down on the floor, and we took convenient stations for noting what might pass. Just then a large fly, of the genus Musca, made its appearance, and soon became aware of the presence of the scorpion. A strange fury seemed to seize it, irresistably impelling it to an insane attack on the terrible occupant of the wall: it flew at it with all the little force it could muster, the scorpion meanwhile stretching out its lobster-like claw to catch it as it came. At the first charge, the fly rebounded from the crustaceous integument of its adversary, having done no more damage than if a child were to apply its hand to the well-mailed body of a cuirassier. It seemed amazed at its own audacity; and, in a state of great apparent agitation wheeled round, and taking precipitately to flight, soon put two or three yards of safe space between itself and its formidable but wingless foe. We now forcibly hoped "the better part of valour" might be allowed to prevail. But no! the tiny creature stood—it ventured to look—there glared still in view of the malignant form—what could the poor animal do but make a second brilliant onset, in which it again eluded the out-stretched claw of its enemy, and, as before, was successful in effecting a retreat? "Surely," we mused, "no further knight-errantry will be attempted—the most exacting would consider this enough." But we were mistaken. Again and again did the fly return to the combat, till in an unguarded moment it flew exactly into the open claw, which closing, rendered escape impossible. The generosity of a Mouravieff was scarcely to be looked for in the scorpion, which, as will be readily believed, lost no time in devouring its gallant captive. Possibly the fly may have been partly dazzled by the glare of the lamp. But undoubtedly it was in the main fascination, induced by the sight of the dread figure on the wall, that impelled it to begin the unequal contest, which could terminate only in the loss of its life.—*Robert Hunter; Edinburgh, June,* 1856.

Capture of Hydroporus melanarius in Cumberland.—Two days dredging in the mossy holes of a moor, near Lanercost, have produced me a pair of the very rare Hydroporus melanarius, *Sturm.*—*Thomas John Bold; Long Benton, Newcastle-on-Tyne, July* 21, 1856.

Note on the Nests of Hydrophilus caraboides and Hydröus piceus.—Perhaps the following notice, respecting the construction of the singular cocoon, or rather nest, of two of our aquatic beetles, may not be unacceptable to the readers of the 'Zoologist,' as I believe that no description of the process has hitherto been given. My observations were made upon insects living in a tank of glass, in my chambers in the Temple, during the month of May last. I had then a pair of Hydrophilus caraboides, whose proceedings I was enabled to watch. The leaves of the lesser spear-wort (*Ranunculus Flammula*), a plant of which was growing in the tank, were employed by the beetles in the formation of their nest. I found that they cut the leaves in a transverse direction near the stem, under water; that the detached portion was bent, by the joint efforts of the insects, till the point of the leaf approached the cut part, which caused it to assume the form of the tilt or arched head of a waggon. During this operation, and indeed until the whole was completed, the male was on the female's back, firmly clasping the edges of her elytra with his last pair of legs, and bending his head and thorax over hers. The hinder legs of the female were engaged in keeping together the extremities of the severed portion of the leaf whilst she closed up the openings with a light-coloured species of silk. This was a most curious and interesting process. The insect protruded from the extremity of her abdomen a forked organ, closely resembling two wasp stings, which moved with great rapidity, working a glutinous secretion between its points, much as a confectioner spins melted sugar. This gluten appeared to harden instantly, forming a close and tenacious web. As soon as the little ark was completed, a singular appendage was added to the upper part of the truncated end or stern, in the shape of what I shall call a flagstaff. This was slightly spatulate at its extremity, but soon curved longitudinally under the sun's heat. The concave side was always turned from the stern. The flagstaff itself was entirely composed of the above-mentioned gluten, and was about half an inch high. I was unable to observe the actual deposition of the eggs; but the larvæ were excluded in about a week. I should add, however, that this was under a high temperature, not unfrequently upwards of 90 degrees; the tank being enclosed with glass. This pair of beetles constructed no less than three of these nests, all floating freely on the surface of the water. I afterwards placed a pair of Hydröus piceus in the same tank. These also formed a nest, and one only. Of course I could not tell how many they might have made before they came into my possession. The plant selected by these insects was a Ranunculus with divided leaves, like a buttercup, which floated. The nest was in the shape of a shallow bag, fixed to the under side of the leaf, which was not bent, and allowed to remain, still growing, to the plant. It was also furnished with a flagstaff, more bent backwards than that of the Hydrophilus, and not spatular. It was of a dark reddish brown. No extraneous matter was interwoven with the web. The manner of spinning it was the same as that adopted by the Hydrophilus, as was the form of the spinning organ and the relative position of the male and female. It is not easy to give a clear idea of the form of these curious nests in words; but my sketches, which are left in Mr. Newman's hands, may perhaps convey a better. About two hours were employed in the construction of each nest.—*W. J. Bernhard Smith; 1, Plowden Buildings, Temple, July*, 1856.

[I shall be most happy to show Mr. Smith's sketches to any entomologist desirous of seeing them.—*Edward Newman.*]

Capture of Ochina Ptinoides in Cumberland.—I took about a dozen of Ochina

Ptinoides on the ivy growing against the wall of Lanercost Abbey in the beginning
this month.—*Thomas John Bold; Long Benton, Newcastle-on-Tyne, July* 21, 1856

Capture of Anthribus albinus at Pembury.—I do not collect Coleoptera, but w
fortunate enough to meet with the rare Anthribus albinus, on a wet spongy spot
ground near Pembury.—*J. Jenner Weir.*

Mononychus Pseudacori.—On February 6th I found a living specimen of Monon
chus Pseudacori in a bottle with laurel leaves, which could not have been captur
later than November 14th: the leaves that were intended to be its death were m
likely its sustenance.—*George Guyon.*

Edwardsia vestita.—In my note on this curious tubicolous Actinioid (Zool. 5180)
omitted to mention that Mr. P. H. Gosse gave me the zoological history of the a
mal, and pointed out its identity with the form from the Ægean, as described by P
fessor Forbes. Since I last wrote I have obtained a few other specimens. They l
remarkably well in the aquarium, making fresh cases from mud, sand, bits of s
weed, &c.; and are so hardy that one bore a three days' journey by post, in a lit
tin box, to a distant part of Ireland with perfect safety.— *W. Alford Lloyd;* 19
20, Portland Road, Regent's Park, London, July 26, 1856.

Occurrence of the Serotine Bat in the Isle of Wight.—On the 3rd of January, wh
at Ventnor, something alive was brought to me wrapped up in a duster, with the
quiry whether I wanted a "rattle-mouse:" having no very clear ideas of what
animal bearing that cognomen might be, I shook the cloth into a foot-tin, imm
diately covering it with a fire-guard, when I found the mysterious stranger was a S
rotine bat, a species stated in Bell's work to be nearly confined to the neighbourho
of the metropolis, but which, I am told, is not uncommon in the Island. It
taken hybernating in an old chimney, and immediately ate some raw meat left with
and in four days' afterwards would take it from the fingers, and suffer itself to
stroked. I often allowed it to fly about the passage of an evening, and remark
(contrary to what is stated of some species) that it could rise and take wing with e
from the flat surface of the carpet: it frequently slept for several days during
colder weather; and on March 7th it was found dead in the cage suspended by
hinder feet in the usual attitude of rest. That it knew me I would hardly venture
say; but certainly on one occasion it squeaked in alarm when another person offe
to touch it, which it never did with me after the first few days.—*George Guyon.*

15 AU 56

TO CORRESPONDENTS.

Communications by the Rev. W. T. Bree, George Wolley, Esq., R. Q. Couch
., Edward Parfitt, Esq., and William Alford Lloyd, Esq., are unavoidably post-
ed. Notices of Mr. Gosse's 'Tenby,' Mr. Dallas' 'Introduction to Zoology,' and of
ral serials remain in MS.

If Mr. Webster will oblige me with the loan of one of his shells, I shall have
t pleasure in obtaining for him the information whether or no the species has
described.

Have the Meetings of the Entomological Society ceased with the resignation of
Douglas? They were formerly continued throughout the summer.

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ii, Pinastri, Pulchella, Cribrum, Grammica, Quadra, Versicolor, Fagi, Cucullina,
melita, Dromedarius, Trepida, Crenata, Curtula, Anachoreta, Anastomosis, Auricoma,
on, Rubiginea, Lychnitis, Asteris, Absinthii, Orichalcea, Fraxini, Leporina,
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